CADD/GIS TECHNOLOGY CENTER

for facilities, infrastructure, and environment

The CADD/GIS Technology Center

For Facilities, Infrastructure, and Environment

Business Plan 2003-2005

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1.0 EXECUTIVE SUMMARY

1.1 Objectives

This Plan describes the overall goals, long-range strategies and specific three-year goals for the CADD/GIS Technology Center for Facilities, Infrastructure, and Environment (the Center), located at the U.S. Army Engineer Research and Development Center's Information Technology Laboratory in Vicksburg, Mississippi. The Center, as described, includes the Board of Directors (BoD), Corporate Staff (CS), Field Working Groups (FWG), and Center staff. The Plan looks back at the impact of past initiatives and the influence of those impacts and a changing business environment on strategic and execution plans for the future.

This Plan is intended to:

- Provide support for the existing customer base and a transition to a significantly expanded business base, including all Federal agencies and state and local governments.
- Promulgate a long-term vision for the Center to act as a focal point for computer-aided drafting and design (CADD), geographic information system (GIS), and facility management (FM).
- Provide a vehicle to communicate the Center's business intentions and to leverage resources more effectively.
- Provide information to non-member agencies who are developing companion efforts and who may be working on potentially converging initiatives.
- Seek the best value for government money by minimizing redundancy while encouraging partnering and collaboration.
- Focus attention on the business technology areas with the highest Return on Investment (ROI).
- Identify and support the role of Facilities related CADD/GIS technology to the National Spatial Data Infrastructure.

1.2 Vision

The Center is recognized as the focal point for standards and technology-leveraged life-cycle solutions by the installation/facility end users and design agents within DoD and Federal, State and Local governments.

1.3 Mission

- Be the driving force for implementation of standards.
- Develop nationally recognized and accepted common standards.
- Establish cooperative interaction of private, public, and academic resources for the investigation, verification, and transfer of integrated information technologies for installation/facility design, construction, management and support.
- Identify and promote private and public sector best practices.

- Establish common data elements to foster increased sharing of information and reduce redundant data gathering.
- Ensure that adequate, accurate geospatial facility, infrastructure, and environmental information is available for life-cycle management.
- Serve as the Federal Geographic Data Committee (FGDC) Working Group on Facilities Infrastructure and the Environment, actively supporting the National Spatial Data Infrastructure (NSDI).

1.4 Keys to Success

- Become the Federal center of expertise for CADD, GIS, and FM information, related to facilities, infrastructure, and environment.
- Be adequately manned to meet customers' present and future needs.
- Provide cost-effective products and services.
- Develop products using a proactive rather than a reactive approach.
- Implement technology-based strategies to solve CADD/GIS/FM challenges for customers with differing needs.

2.0 ORGANIZATIONAL SUMMARY

The Center offers a full range of technical and professional services for CADD, GIS, and FM systems. Services include development and implementation support for data content standards, support for procurement of products and applications, provision of a clearinghouse for information exchange, and furnishing technical assistance to managers and users of these systems.

2.1 History

The Tri-Service CADD/GIS Center evolved from the U.S. Army Corps of Engineers CADD Center at the Information Technology Laboratory located at the Waterways Experiment Station. Initial funding for the Tri-Service Center came from Program Budget Document 650, which was generated in FY 92, to implement Defense Management Review Directive (DMRD) 982. Since its beginning, the Center has been instrumental in the development, implementation, and support of CADD, GIS, and FM standards throughout DoD. The Center has now established itself as a recognized leader in the CADD/GIS FM field. The Tri-Service CADD/GIS Technology Center was governed by an Executive Steering Group (ESG), representing the Army, Navy, Air Force, and other DoD agencies, which established policy and approved the work program of the agency. At their meeting of 15 June 1999, the ESG changed the name of the Tri-Service CADD/GIS Technology Center to the CADD/GIS Technology Center for Facilities, Infrastructure, and Environment (Center). This change was made in anticipation of a broader role for the Center in providing services and products to other Federal agencies. The ESG also changed their name to the Board of Directors (BoD) and adopted a revised organizational Charter at their 31 August 1999 meeting. The Executive Working Group and the Field Technical Advisory Group were reorganized to become the Corporate Staff (CS). In October 1999, the Federal Geographic Data Committee (FGDC)

Coordination Group approved a plan to merge the FGDC Field Working Group with the Center.

2.2 Capabilities

Located at the Information Technology Laboratory (ITL) in Vicksburg, MS, the CADD/GIS Technology Center is able to leverage the extensive research and development (R&D) expertise and technical infrastructure of ITL and the entire U.S. Army Engineer Research and Development Center (ERDC). The CADD/GIS Technology Center staff consists of professionals with advanced degrees and over 200 man-years of experience in the use of CADD, GIS, and FM technology to solve complex problems related to watershed management, facility management, environmental compliance and cleanup, conservation of natural and cultural resources, comprehensive planning, and all engineering design disciplines. Also, the Center has access to ITL's engineers and scientists and the computer scientists of the Corps of Engineers' Software Technology Center. The Center's staff has access to ITL's high performance supercomputers for large-scale computational modeling, providing a total computational capability of approximately 1.4 trillion calculations per second. The Scientific Visualization Center in ITL provides support for CADD/GIS animation and virtual reality projects. Additional resources available to the Center include:

- The CADD/GIS Technology Center mini-Lab, with the very latest computers and peripheral devices.
- A video technology room equipped with a Panoramic video system that supports collaborative data interpretation efforts used in conjunction with ITL's Training Facilities, which contains 37 computer stations for class participants.
- The GroupWare Facility, which enables electronic meetings and anonymous input in brainstorming sessions.
- An engineering and technology library collection of over half a million items.
- One of the largest high-speed communications networks in the nation.
- The 24-hour Network Monitoring Facility.
- Uninterruptible Power Supply Facility, which ensures an uninterruptible power supply.
- Visual Production Center, which provides complete video production and publishing support.

2.3 Organizational Structure

2.3.1 The Center is governed by a Board of Directors (BoD) as defined in the current Charter. In order to support this Business Plan a chairperson shall be identified. The chairmanship of the BoD will rotate among the member agencies annually.

2.3.2 The Corporate Staff serves the BoD as defined in the current Charter. The Corporate Staff will determine the projects necessary to meet functional goals, provide guidance during execution to ensure financial and investment goals are achieved, review all major products prior to release to the field, and encourage

implementation of these products. In order to execute this Business Pan the Corporate Staff hereby establishes the following two standing committee:

The **Standards Working Group** shall provide resolution strategies for Center Standards integration efforts or when conflicts arise between Center Standards and other standards bodies. This group shall also provide input to long-term strategic goals for the standards, prioritize short-term (fiscal year) goals to meet project objectives, to include aiding in scheduling releases, and coordinate geospatial data standards activities among DoD, vendors, and other Federal and National standards organizations.

The **Content Review Board** shall provide direction and input to the Foundation Knowledge Web Site. This group shall define business lines for the web site, develop plans for sustainment of the site and oversee content within the business lines.

2.3.3 The staff of the Center plays an important role in helping ensure that the Center's mission and objectives support both the Corps of Engineers' and Federal Agency members' organizational visions and strategic plans. The staff's "situational awareness" of current members' organizational trends and agency goals will supplement the BoD's decision process in identifying long-term goals and program direction.

2.3.4 Field Working Groups are critical for identifying and implementing usable tools and applications. The following Field Working Groups are currently active in supporting the annual work plan: Civil Works, Comprehensive Planning, Environmental, Natural and Cultural Resources, Design and Construction, Facility Management, and Systems. Field representation can be by agency contract personnel providing they are representing agency interests and not those of a particular company or product.

2.3.5 External Partners are those private sector and academia representatives that provide counsel and technical assistance so that best practices can be implemented. The Center currently maintains strategic alliances with the International Alliance for Interoperability (IAI), the National Institute of Building Sciences (NIBS), Open GIS Consortium (OGC), and the Installation Management/Facilities CAD2 Contract vendors. Additional appropriate alliances are continually being sought.

2.3.6 Because the CADD/GIS Technology Center organization is the FGDC Facilities Working group, membership on any of the committees and working group is open to Federal, State and local governments; as well as, industry.

3.0 PRODUCTS, SERVICES, AND CUSTOMERS

The original Charter, signed in 1992, described eight functions for the Center. They were: acquisition, developing applications, promoting communications, promoting standards, furnishing technical advice, interfacing with professional organizations and industry, evaluating technological developments, and recommending necessary policy. These have not fundamentally changed; however, broadening the Center's customer base and developing closer ties with industry partners will help to achieve even further economies of scale. Each group has specific and unique capabilities that can be brought to the organization.

In order to promote best business practices, the Center encourages implementation of the most cost-effective technologies, with a focus on the organization of data. The Center plays a major role in the development and promotion of consensus standards in order to attain and use the highest quality information for decision making and use by a multitude of users in disparate locations. The Center provides a meaningful business performance measurement system, and markets and champions initiatives and capabilities to provide solutions to all levels of the industry.

The Center's **products** include business decision-making tools and guidelines for standard implementation approaches, which support a graphical capability to aid in the decision process of facility, infrastructure, and environmental life-cycle management. Center **services** are provided to the DoD and other Federal departments and agencies. The goal is to ensure that member and non-member agencies receive information on the most cost-effective approach and are able to reap the highest Return On Investment by enhancing their business capabilities.

The Center's **customer** base should be expanded to include not only the DoD engineering organizations we have traditionally served, but also other organizations operating and maintaining Federal properties. In addition to Federal customers, the facility, infrastructure, and environmental management business is common to corporate management, colleges and universities, and state and local governments. The Center is partnering with those having similar interests to identify and implement the best and most cost-effective practices.

4.0 MARKET ANALYSIS SUMMARY

4.1 Current and Future Market

We intend to identify potential customers in the following categories: installations, design offices, laboratories, and headquarters organizations. Appendix A is not meant to be all-inclusive, but is provided as a baseline from which to measure the success of marketing efforts.

As of 1 August 1999, the Army's Assistant Chief of Staff for Installation Management's Directorate of Plans and Operations identified 70 major/minor Continental United States (CONUS) and 45 major/minor Outside the Continental United States (OCONUS) installations. In addition, the Army has four laboratories that are potential users of the Center and its products and services. There are also 41 Corps of Engineers Districts,

many having both Civil Works and Military Program Divisions. The Navy's Installations and Facilities Directorate identified 71 CONUS and 23 OCONUS installations, and the Marines have 21 CONUS and 2 OCONUS installations. There are also 10 Navy design offices at Engineering Field Divisions and Field Activities. The Bases and Units Division of the Air Force reports that there are 67 major installations in CONUS, 13 OCONUS, 3 Air National Guard bases, and 4 Air Force Reserve bases.

Although much of the Center's past marketing efforts to the armed services has been focused on the engineering functional area, current and future efforts will seek to include other potential functional users, including communications and security forces. The Center currently serves agencies outside DoD, and has begun to focus more attention on attracting other Federal agencies, e.g., the State Department and the General Services Administration. The Center will also encourage universities, local and state governments, and commercial (architect-engineer service contractors and software/hardware vendors) customers to take advantage of the CADD/GIS/FM standards and other products developed by the Center.

4.2 Current Users

In order to establish a baseline from which to project Business Plan goals and to measure future accomplishment, the Center must identify its current users. The Center initiated a tracking effort as of August 2001 with registrations returned from Release 2.0 of the Spatial Data Standard/Facility Management for Facilities, Infrastructure, and Environment (SDSFIE/FMSFIE). Registrants answering "yes" to the question "Have you, or your organization, either through in-house or contract efforts, used standards developed by the CADD/GIS Technology Center on a project or activity?" revealed the following current users:

U.S. Army Corps of Engineers	69
Army installations	37
Navy installations	25
Marine installations	8
Air Force installations	58
Other Federal government	9
State government	4
Local government	9
Foreign government	1
Universities	9
Commercial	184
Total Users	413

This user base initiative to capture the number of users will be expanded as we distribute the future versions of Standards and other products. The Center's marketing strategy will seek to retain and expand its DoD customer base, to reach out to other potential

Federal agency users, to seek other partners in institutions of higher learning, and to broaden its base of commercial users.

5.0 STRATEGY AND IMPLEMENTATION SUMMARY

5.1 Customer Support Objectives

The Center focused on supporting engineering customers during the initial years of its existence. The primary goal of the proposed marketing effort is to effectively expand the Center's customer base. To accomplish this, the primary focus will be on installation customers and the contractors who are supporting them. Building a closer relationship with the installations will provide the best access to this market. Since additional marketing resources are not being proposed, this can only be accomplished by changing the delivery structure as described below. The Center's attractiveness to customers is proposed to be enhanced by ensuring that the business line products and services truly support real world business issues with which DoD organizations, and other Federal and state agencies, are dealing. Business lines will be focused to address as broad a spectrum of issues as possible. A major emphasis will be placed on ensuring that organizations and their managers are aware of the business solutions the Center offers. This can be accomplished through an expanded Web presence and, more importantly, through articles and advertisements in service magazines that are oriented toward managers and corporate executive officers. The Center's WEB Bulletin will be re-oriented to include business management concerns, as well as technical issues.

5.2 Specific Goals and Objectives for FY 2003

- 5.2.1 Actively manage budget for Center support groups.
  - 5.2.1.1 Actively manage expenses of BoD, CS, and FWGs.
  - 5.2.1.2 Increase use of Placeware, and telephone conferences.
- 5.2.2 Market Center services to others.
  - 5.2.2.1 Market Spatial Data Standard for Facilities, Infrastructure, and Environment (SDSFIE), Architectural/Engineering/Construction (A/E/C) CADD Standard and the U.S. National CAD Standard (NCS).
  - 5.2.2.2 Market the products and services to Office of Secretary of Defense.
  - 5.2.2.3 Continue leading the CADD/GIS Facilities Community through the FGDC Facilities Working Group. Refine the approach for the non-federal Facility users to participate in the process.
  - 5.2.2.4 Establish Facilities, Infrastructure, and Environmental Committee leadership for objects with the Open Geospatial Consortium.
  - 5.2.2.5 Continue to support the International Alliance for Interoperability for the object strategy for the Design Business area.
  - 5.2.2.6 Continue development of SDSFIE as an American National Standards Institute (ANSI) standard.
- 5.2.3 Improve communication
  - 5.2.3.1 Revamp internet site

5.2.3.1.1 Develop an Internet Knowledge Base Portal template.
5.2.3.1.2 Allow more user friendly access to Center activities and products.
5.2.3.1.3 Establish hierarchy product line.

5.2.3.2 Improve user access.
5.2.3.2.1 Database recognition of point of contact names, addresses, etc.
5.2.3.2.2 Grouping and Indexing of meeting minutes and internal documents.
5.2.3.3 Develop and execute user survey of Center product and services.

5.2.4 Standards utilization.
5.2.4.1 Ensure guidance and policy are issued by the agencies regarding the use of standards (Corporate Staff function).
5.2.4.2 Establish feedback procedure to ensure improvements are incorporated into succeeding versions of the standards (Standards Working Group function).

5.2.5 Establish guidance related to Return on Investment.
5.2.5.1 Improve guidance for project submitters.
5.2.5.2 Develop actual Return on Investment approach based on annual work plan.

5.2.6 Increase funding for product and service development and delivery.
5.2.6.1 Continue funding provided by the Services for annual work plan.
5.2.6.2 Seek reimbursable funds from other government agencies.

5.3 Two-Year Goals

5.3.1 Increase awareness/use of the Center and its products and services by the 115 Army installations and four Army Laboratories; the 94 Navy installations; the 23 Marine installations, and the 87 Air Force installations (internal market) to meet the measurements in the Balanced Scorecard (BSC) SR-1.

5.3.2 Increase awareness of the Center to other Federal, state, and local government and private sector organizations to meet the measurements in the BSC SR- 2.

5.3.3 Establish links to industry organizations and make them aware of Center activities.

5.3.4 Survey the Federal, state, and local customers to determine the level of awareness of the Center and its products and services.

5.3.5 Increase Center standards use at DoD design offices to meet the measurements in the BSC SR- 3.

5.3.6 Seek implementation of the Center's products and services at each DoD agency within three years of completion.

5.3.7 Document business benefits of the Center by measuring ROI, with an objective of achieving a 15:1 benefit-to-cost ratio. Provide solutions-based product lines for common business practices that can be enhanced by the use of CADD/GIS technology

5.3.8 Increase the number of attendees at Center training courses by 50% of the 250 FY 2000 attendees, and seek balanced participation in training from all member organizations.

5.3.10 Facilitate and promote interested parties to communicate best practices, lessons learned, and expertise through the Knowledge Management Portal.

5.3.11 Conduct the biannual CADD/GIS Symposium.

5.4 Delivery

People are the key element in the delivery of the Center's products and services. There are two very important roles the Center people play in this delivery process. First, they are tasked with locating and accessing methods of implementing the best CADD, GIS, and FM practices in our business. Secondly, they must disseminate that information specifically to DoD and other Federal organizations, their managers, and the private sector companies that support them. In many instances the Center will participate in development of those best practices. An example of this is the development of the standards products by the Center in cooperation with industry at the national and international association level. The mix of activities within the Center's yearly work plan should be 70% oriented toward supporting the DoD and Federal unit, 20% oriented toward the private sector networking and collaboration, and 10% managing new product development.

In order to ensure that products are of the highest quality and are acceptable to users, the Center shall receive approval from the project sponsors prior to release of the product. The products shall be available to customers from the Web page, as well as through direct marketing. A regular notification of new product availability shall be provided to all identified customers.

Delivery of the Center's message can be accomplished using many sources. The information must be intuitive, instructive, and educational in nature. We must be aware of the constant rotation of personnel in our organization. The impact of this is heightened by the rotation of military personnel. Based on the FY 98 Center Survey, over 50% of the customer base was not aware of the Center, and a significantly higher percentage was not aware of its products and services. The Web site should act both as a knowledge base and as a distance learning source.

All products, both past and present, shall be posted on the Web. Information provided shall be viewed from three perspectives: (1) that of an executive looking at the site attempting to understand the role of the Center; (2) that of a practitioner needing assistance; and (3) that of one involved with the Center who needs to get copies of all pertinent information such as charters, current group members, meeting dates, agendas, minutes, and attendance lists of previous meetings.

5.5 Personnel Plan

There are currently 20 persons assigned to the Center staff in Vicksburg. The staff is assigned by area of responsibility/expertise. There are natural groupings based on technological expertise or the field user group supported. The Center is operated in a matrixed approach that affords the greatest amount of flexibility for the Center Chief. This structure supports the technology needs of the Center.

Personnel should continually strive to increase their knowledge of the technological improvements in their field of expertise. However, an additional focus on the business applications of that technology must be acquired. Networking should not be exclusively with technology contacts but should include industry and association contacts related to functional operations and maintenance required by the business units. These contacts should include, but not be limited to, DoD units demonstrating advanced application of technology but, more importantly, to local governments and college and university physical plant directors. Since the DoD is one of the primary facility owners in the world, networking with other owners, especially in large national organizations with similar responsibilities, is highly endorsed. The personnel of the Center are the key links and distributors of information on this subject in the DoD and, as envisioned, throughout the Federal government. They are our marketers.

Effort must be oriented toward improving the staff's ability to market their knowledge to as wide an audience as possible. In order to accomplish this effectively, they must generate information that can be passed on through more than one-on-one communication. The best approaches are through writing and presentations to selected audiences in addition to e-mail, web presence, and distance learning techniques.

The strength of the Center is its link to the field practitioners. This link is established and maintained primarily through the Field Working Groups and their feeling of ownership of "a piece of the rock." There are currently seven Field Working Groups: Design and Construction, Facility Management, Comprehensive Planning, Environmental, Natural and Cultural Resources, Civil Works, and Systems which acts to integrate the flow of information. The Field Working Groups cover all life-cycle issues from planning to disposal. They may be augmented by the Corporate Staff, with the establishment of Task Groups targeted at specific projects that must be accomplished within definite lengths of time.

5.6 Management Plan

The management structure defined by the original Charter has proven to be a very workable model. Each level of the organization has specific roles and responsibilities as defined in the Charter. The original concept of linked rotational assignments, while initially important, has been overcome by the teamwork developed by past and current participants. The changes being made to the earlier organizational structure should also assist in reducing costs and enabling the groups to meet both in joint and parallel sessions.

While we do not intend to be prescriptive, management processes will emphasize the use of the balanced scorecard for strategic plan formulation. Projects considered for inclusion

in the annual work plan will be prioritized through the application of criteria that will consistently apply quantitative measures that balance four critical perspectives. These four perspectives are strategic results, customer, internal process, and learning and growth.

CADD/GIS Technology Center Balanced Scorecard Overview	
Perspective	**Goals**
Strategic Results	SR-1. DoD and other federal agencies are informed on the use and benefits of integrated information technology. SR-2. Increased use of integrated information technology and standards throughout DoD and Federal Agencies through continuous upgrade. SR-3. Support an increased use of integrated information technology and standards throughout State and Local Governments..
Customer	C-1. DoD and Federal Governments at all levels are aware of the products and services available through the CADD/GIS Technology Center. C-2. Improve identification of customer needs. C-3. Individual users, facility managers and program managers for centrally funded systems are satisfied with services, products and standards..
Internal Process	IP-1. Develop a plan for identification of customer needs. IP-2. Improve product development and delivery. IP-3. Improve accessibility to and methodology for training on Center standards and products.
Learning and Growth	LG-1. Maintain Center staff's meetings with software vendors, Standards organizations, professional organizations, and field users. LG-2. Increase number of papers presented by Center Staff at professional conferences. LG-3. Increase the stability of the Center Staff. LG-4. Increase the stability of the membership on the BoD, Corporate Staff, and Field Working Groups.

Traditional project control procedures will begin with the preparation of thoroughly supported estimates of cost and benefits. These estimates will be based on the thorough understanding and documentation of requirements, the effectiveness of the technology to be applied, the development approach, and the impact on the processes and stakeholders affected by implementation. Project life-cycle management principles will be employed, including establishment and control of baseline data to facilitate the maintenance of current Return on Investment data and to ensure the realization of the estimated Return on Investment.

In addition, the following oversight capabilities shall be provided at the Center:

Business Management - The Corporate Staff will provide the functionality of business management tasked to keep an eye on how resources are being expended from a business point of view, getting the most for the money and achieving the ROIs identified for the annual work plan.

Industry Coordination – This function will be provided by Center personnel in conjunction with the Standards Working Group. These groups will provide the primary coordination aspects to ensure that we are aggressively seeking the best business practices being used by the private sector. The Corporate Staff will work to ensure that we are competitive and that we attain the highest return possible.

5.7 Financial Management Plan

For the purpose of planning and managing funding requirements, budget requests, and budget outcome adjustments, projects will be defined around specific process improvement objectives, or specific support activities. Return on Investment measures derived from the cost and benefit estimates will be incorporated into the balanced scorecard process. Cost estimates will be detailed and modular enough to adjust the scope, schedule, and benefits. Impact assessments will provide feedback to plans and budgets. Quarterly project financial status reviews of baseline assumptions, ground rules, and technical progress will be conducted to allow early identification of changes to estimated project costs.

Funding for the Center's initiatives comes from DoD. Our goal is to promulgate the significant ROI message from implementing standards to an expanded user base, which will encourage further investment on the part of participating agencies and other users. Funding for the core mission products, and Center mission support, should remain at the approximate current levels.

6.0 Affirmation and Review of Business Plan

The goals and strategies expressed in this Business Plan will be reviewed and updated annually by the Corporate Staff at their meeting approving the annual work program.

6.1 Approval of the FY 03 –05 Business Plan. This Business Plan has been reviewed and approved by the Corporate Staff membership.

Paul J. Bouley
Paul Bouley
Corporate Staff Chair

6.2 FY 02 Members.

Name	Organization
Paul Bouley*	Chair, Marines
Harold Smith*	Center

Paul Herold*	Coast Guard
Stan Gross *	Air Force
Vicki Williams	Air Force
Jean McGinn*	USACE
Tom Hart	USACE
Fredrik Wiant	USACE
Larry Rogers	USACE
Tony Vajda*	Army
Dennis Scheessele*	Navy
Bobby Bean	Navy
Jim Carberry	Navy
Chris Kyburg	Navy
Betty O'Connor*	GSA
Al Johnson	NASA
Bill Brodt*	NASA
Alexander Shaw*	NIBS
Earl Kennett	NIBS
Daniel McLaughlin*	DLA
Mike Weingord*	NIMA

* Member Executive Committee

APPENDIX A. CURRENT AND FUTURE MARKET BASELINE

CUSTOMER SUBTYPE & Installation Name	Organization Name	State or Province	Country
AIR FORCE			
Andrews AFB	ANG CECS	MD	USA
Arnold AFB	USAF/AEDC/SDF Projects	TN	USA
Arnold AFB	USAF/AEDC/SDF	TN	USA
Arnold AFB	ACS MS 1800	TN	USA
Arnold AFB	ACS/CMP	TN	USA
Brooks AFB	HQAFCEE-DCD	TX	USA
Dyess AFB	7CES/CEN	TX	USA
Eglin AFB	46 TW/XPE	FL	USA
Eglin AFB		FL	USA
Ellsworth AFB	28 CES/CEVR	SD	USA
Hickam AFB	HQ PACAF/CEPR	HI	USA
Hill AFB	USAF, OO-ALC/EM	UT	USA
Hurlburt AFB	16 CES/CEC	FL	USA
Hurlburt AFB	16 CES/CECP	FL	USA
Keesler AFB	81st CES/CEOE	MS	USA
Lackland AFB	37 CES/CECC2	TX	USA
Lackland AFB	37 CES/CECC4	TX	USA
Lackland AFB	37 CES/CECC2	TX	USA
Little Rock AFB	314 CES/CEVA	AR	USA
Luke AFB	56 CES/CEOE	AZ	USA
Mildenhall	USAF in Europe, 100CES	England	England
Niagara Falls	914 Airlift Wing	NY	USA
Patrick AFB	45 CES/CECB (CCAS)	FL	USA
Peterson AFB	HQ AF Space Command/SCXT	CO	USA
Peterson AFB	21 CES/CECB	CO	USA
Peterson AFB	21 CES/CECT	CO	USA
Robins AFB	WR-ALC/EMX	GA	USA
Robins AFB	78 Civil Engineer Squadron	GA	USA
Robins AFB	WR-ALC/EMX	GA	USA
Robins AFB	78 CEG/CECE	GA	USA
Scott AFB	HQAMC/CEPR	IL	USA
Tinker AFB	72 CEG/CEC	OK	USA
Tinker AFB	OC-ALC/EMR	OK	USA
USAF Academy	10th Civil Engineer SQ CEOEG	CO	USA
USAF Academy	10 CES/CEOE	CO	USA
Wright-Patterson AFB	HQ AFMC/CEPS	OH	USA
Yokota AB	374 CES/CEOE	APO	Japan
ARMY			
	554 RHS/DES	APO	AP
	PAE-LRMC - Facilities Branch	APO	AE
	CEPOF-ED-D	APO	AP
Anniston Army Depot	SIOAN-DPE-IED	AL	USA
Anniston Army Depot	Building 94	AL	USA
Camp Ripley	Minnesota Dept. of Military Affairs	MN	USA
Delaware ANG	Environmental Protection Specialist	DE	USA
Fort Carson	Environmental	CO	USA
Fort Detrick		MD	USA
Fort Hood	AFZF-PW-EPS	TX	USA
Fort Hunter	AFRC-FMH-DPW-E		USA
Fort Irwin	AFZJ-PN-EN	CA	USA
Fort Jackson	ATZJ-DLE-ES	SC	USA
Fort Leonardwood	Director Public Works	MO	USA
Fort McCoy	AFRC-FM-SSZ	WI	USA
Fort Myer	Fort Meyer Military Community	VA	USA
Fort Richardson	FMD Environmental, Alaska Army	AK	USA

	National Guard		
Fort Rucker	ATZQ-DPW-PS	AL	USA
Ft Knox	ATZK-OSE, DBOS	KY	USA
Ft Riley	Public Works	KS	USA
Ft. Leonard Wood	366TRS, Detachment 7	MO	USA
Ft. McCoy	DSS Ft McCoy W1	WI	USA
Hawaii Army National Guard	Environmental	HI	USA
HQ TRADOC	ATBO-SE	VA	USA
Idaho Army National Guard	IDARNG	ID	USA
Public Works Business Center	AFZB-PW-P-E		USA
Tobyhanna Army Depot	AMSEL-TY-RK-E		USA
U.S. Army Environmental Ctr	SFIM-AEC-RMI	MD	USA

MARINES

Camp Lejeune	AC/S EMD GIS Office	NC	USA
Camp Lejeune	Public Works Office	NC	USA
Cherry Point	Facilities System Service Office	NC	USA
Cherry Point	Facilities Engineering ECDSD	NC	USA
Parris Island	US Marine Corps Recruit Depot	SC	USA
PIK	Public Works Office		USA
Quantico	Marine Corp Base Quantico	VA	USA
Twenty-nine Palms	NREA GIS LAB	CA	USA

NAVY

Atlantic Div., NAVFACENGCOM	Code 18323	VA	USA
EFAWEST NAVFAC	Code 70224	CA	USA
EIA Midwest	EIA Midwest	IL	USA
Naval Station Newport	Naval Station Newport	RI	USA
Naval Surface Warfare Center	Indian Head Division	MD	USA
Navy Public Works Center	Code 420.3	FL	USA
Navy Public Works Center	Code 400C	FPO	Japan
Navy Public Works Center	Code 412	HI	USA
Navy PWC Pearl Harbor	Code 410	HI	USA
Patuxent River NAS	Natural Resources Branch	MD	USA
Patuxent River NAS	PW Dept.	MD	USA
Patuxent River NAS	NHS Patuxent River	MD	USA
Port Hueneme	NFESC (ESC-64)	CA	USA
Port Hueneme	NFESC	CA	USA
Portsmouth Naval Station	SUPSHIPPORTSMOUTH	CA	USA
Southern Div, NAVFACENGCOM	SOUTHNAVFACENGCOM	SC	USA
Southern Div., NAVFACENGCOM	Southern Division, Naval Facilities Engr. Command	SC	USA
SW Div., NAVFACENGCOM	Code 04MG.CM	CA	USA
SW Division, NAVFACENGCOM	Naval Facilities Engineering Command, SW Division	CA	USA
U.S. Naval Air Station, NOLA	Code 82P		USA

USACE

Army Engr Res & Dev Ctr	CEERD-HC-S	MS	USA
Army Engr Res & Dev Ctr	CEERD-ER-W	MS	USA
Baltimore District	CENAB	MD	USA
CERL	USACERL	IL	USA
Charleston District	CESAC	SC	USA
CRREL	USACE-CRREL-RSFISC	NH	USA
Fort Worth District	CESWF	TX	USA
Honolulu District	CEPOH	HI	USA
Huntsville Engr & Spt Ctr	CEHNC	AL	USA
Jacksonville District	CESAJ	FL	USA
Kansas City District	CENWK	MO	USA
Little Rock District	CESWL	AR	USA
Los Angeles District	CESPL	CA	USA
Louisville District	CELRL	KY	USA
Memphis District	CEMVM	TN	USA
Mobile District	CESAM	AL	USA
Nashville District	CELRN	TN	USA
New England District	CENAE	MA	USA
New Orleans District	CEMVN	LA	USA
New York District	CENAN	NY	USA
North Atlantic Division	CENAD	MA	USA

Pacific Ocean Divison	CEPODE	HI	USA
Pittsburgh District	CELRP	PA	USA
Portland District	CENWP	OR	USA
Rock Island District	CEMVR	IL	USA
Sacramento District	CESPK	CA	USA
San Francisco District	CESPN	CA	USA
Savannah District	CESAS	GA	USA
Seattle District	CENWS	WA	USA
Southwestern Division	CESWD	TX	USA
St Louis District	CEMVS	MO	USA
Transatlantic Programs Ctr	CETAC	VA	USA
Tulsa District	CESWT	OK	USA
USACE HQ	CEMP	DC	USA
USACE HQ	CECW	DC	USA
Vicksburg District	CEMVK	MS	USA
Water Resources Support Ctr	CEWRC	VA	USA